

Application No.: 09/732,299
Amendment and Response dated November 5, 2003
Reply to Office Action of July 8, 2003
Docket No.: 669-87
Page 5

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the subject application, and please amend the claims as follows:

Claim 1. (currently amended): A wastewater separator to separate waste from a mixed wastewater stream before said mixed wastewater stream is directed into a sewer system, said mixed wastewater stream including one or more of heavy waste, light waste and water, said wastewater separator comprising:

- a separation container;
- a wastewater inlet to said separation container; and
- a wastewater outlet from said separation container

said separation container comprising:

- a wastewater stream director within said container, said wastewater stream director being sized, shaped and positioned relative to said wastewater inlet to direct said wastewater stream along a preferred flow path to permit said light waste to separate from said wastewater stream in a first direction to a collection area and to permit said heavy waste to separate from said wastewater stream in a second direction towards a heavy waste removal area; and

- a flow-directing outlet baffle within said container for directing said wastewater stream to said wastewater outlet from said heavy waste removal area to remove said heavy waste from said separation container;

wherein the wastewater stream director, flow directing outlet baffle, heavy waste removal area and preferred flow path are sized, shaped and positioned so as to prevent the heavy waste from being trapped with the light waste in the collection area, and so as to cause the heavy waste to be carried out of the separation container with said wastewater stream.

Claim 2. (original): The wastewater separator as claimed in claim 1, wherein said wastewater stream director comprises:

a flow-directing inlet baffle and
a separation flow director, downstream from said flow-directing inlet baffle, for directing said wastewater along said preferred flow path.

Claim 3. (original): The wastewater separator as claimed in claim 2, wherein said preferred flow path has an optimized length within said container to permit an optimized amount of light waste to separate from said wastewater stream in said first section by virtue of its relatively high buoyancy.

Claim 4. (original): The wastewater separator as claimed in claim 3, wherein said flow-directing inlet baffle has cross sectional outlet area sized and shaped to slow said wastewater stream in said container sufficiently to permit said heavy waste to fall from said wastewater stream to said waste removal area.

Claim 5. (original): The wastewater separator as claimed in claim 4, wherein said separation section further comprises a heavy waste collector, said heavy waste collector being sized, shaped and positioned to remove heavy waste falling from said wastewater stream from said heavy waste removal area as said wastewater stream is directed out of said container.

Claim 6. (original): The wastewater separator as claimed in claim 5 wherein said flow directing inlet baffle is sized, shaped and positioned so as to direct said wastewater stream to the bottom of said container at one end thereof, and wherein said separation flow director comprises an inclined ramp having a radiused upper edge and being positioned downstream an outlet end of said flow-directing inlet baffle whereby said wastewater stream is directed upward through said container by said ramp.

Claim 7. (original): The wastewater separator as claimed in claim 6, wherein said heavy waste removal area comprises a portion of the bottom of said container adjacent to said upper edge of said ramp.

Claim 8. (original): The wastewater separator as claimed in claim 7, wherein an inlet of said flow-directing outlet baffle is adjacent to said heavy waste removal area.

Claim 9. (original): The wastewater separator as claimed in claim 1, wherein said flow-directing outlet baffle is detachably attached in said container.

Claim 10. (original): The wastewater separator as claimed in claim 2, wherein said flow-directing inlet baffle is detachably attached in said container.

Claim 11. (original): The wastewater separator as claimed in claim 1, said wastewater separator further comprising a cover detachably attachable to said container, said cover being sized and shaped to removably cover an open top of said container, whereby the light waste floating at the top of the container can be easily removed upon removing said cover from said container.

Claim 12. (original): The wastewater separator as claimed in claim 9, wherein said wastewater separator further comprises at least one outlet handle attached to said flow-directing outlet baffle so that said outlet baffle may be easily removed from said container.

Claim 13. (original): The wastewater separator as claimed in claim 10, wherein said wastewater separator further comprises at least one inlet handle attached to said flow-directing inlet baffle, so that said inlet baffle may be easily removed from said container.

Claim 14. (original): The wastewater separator as claimed in claims 2, 9 and 11 said wastewater separator further comprising a cover detachably attachable to said container, said cover being sized and shaped to removably cover an open top of said container, whereby the light waste floating at the top of the container can be easily removed upon removing said cover from said container.

Claim 15. (original): The wastewater separator of claim 3, said wastewater separator further comprising a cover detachably attachable to said container, said cover being sized and shaped to removably cover an open top of said container, whereby the light waste floating at the top of the container can be easily removed upon removing said cover from said container.

Claim 16. (original): The wastewater separator of claim 3, wherein said flow-directing inlet baffle and said flow-directing outlet baffle are both detachably attached to said container.

Claim 17. (original): The wastewater separator of claim 16, said wastewater separator further comprising a cover detachably attachable to said container, said cover being sized and shaped to removably cover an open top of said container, whereby the light waste floating at the top of the container can be easily removed upon removing said cover from said container.

Claim 18. (original): The wastewater separator as claimed in claim 1, 2 and 17, said wastewater separator further comprising air entraining means associated with said wastewater inlet for entraining air into said wastewater stream.

Claim 19. (original): The wastewater separator of claim 3, said wastewater separator further comprising air entraining means associated with said wastewater inlet for entraining air into said wastewater stream.

Claim 20. (currently amended): A wastewater separator to separate light waste from a mixed wastewater stream, said wastewater separator comprising:

- a separation container having an inlet end and an outlet end;
 - a wastewater inlet to said separation container;
 - a wastewater outlet from said separation container; and
 - air entraining means positioned in the separation container and associated with said wastewater inlet to entrain air into said wastewater stream;
- said separation container comprising:
- a wastewater stream director in the container, said wastewater stream director being sized, shaped and positioned to direct the wastewater stream along a preferred flow path which is generally diagonal across said container to facilitate separation of said light waste; and
 - a flow-directing outlet baffle in said container for directing said wastewater stream from a downstream end of said preferred flow path to said wastewater outlet.

Claim 21. (withdrawn): A method of pretreatment of a wastewater stream before said stream enters a sewer, where said wastewater stream contains grease and food particles, said method comprising the steps of:

- 1) directing said wastewater stream to a separation area;
- 2) directing said wastewater stream along a preferred flow path within said separation area, said preferred flow path being sized and shaped to permit said grease to rise out of said wastewater stream;
- 3) trapping said grease which rises out of said wastewater stream; and
- 4) directing said remaining wastewater, carrying said food particles, out of said separation area and toward said sewer system.

Claim 22. (withdrawn): The method of claim 21, said method further comprising, between step 3 and step 4, the step of trapping said grease within said separation area.

Claim 23. (withdrawn): The method of claim 22, wherein said step 3 further includes permitting said food particles to separate from said wastewater stream towards a food particle removal area; and

said method further comprising the step of directing said remaining wastewater stream through said food particle removal area.

Claim 24. (withdrawn): A method of preventing grease or oil from being carried out in wastewater from a food preparation establishment to a sewer system, said method comprising the steps of:

- 1) entraining air into said wastewater stream;
- 2) directing said wastewater stream to a separation area; then
- 3) removing said grease from said wastewater stream; then
- 4) directing said wastewater stream, carrying said food particles, out of said separation area and toward said sewer system.

Claim 25. (withdrawn): A method of preventing grease or oil from being carried out in wastewater from a food preparation establishment to a sewer system, said method comprising the steps of:

- 1) entraining air into said wastewater stream;
- 2) directing said wastewater stream to a separation area; then
- 3) directing said wastewater stream along a preferred flow path within said separation area, said preferred flow path being sized and shaped to permit said grease to rise out of said wastewater stream; then
- 4) permitting said grease to rise out of said wastewater stream;
- 5) containing said grease within said separation area;
- 6) directing said wastewater stream, carrying said food particles, out of said separation area and toward said sewer system.

Claim 26. (withdrawn): The method of claim 21, said method further comprising the steps of:

providing a container for said separation area, said container comprising at least one baffle detachably attached to said container for directing said wastewater stream along a preferred flow path within said separation area;

removing said at least one baffle from said container, cleaning accumulated waste from said container and said baffle, and replacing said baffle in said container.

Claim 27. (withdrawn): For use in association with a food preparation establishment producing a drain water stream containing food particles and grease, a method of preventing said grease from being carried out of said food preparation establishment to a sewer system, said method comprising the steps of:

1) directing said drain water stream to a separation area within a container, said container having a cover detachably attached thereto; then

2) directing said drain water stream along a preferred flow path within said separation area, said preferred flow path being sized and shaped to permit said grease to rise out of said drain water stream; then

3) permitting said grease to rise out of said drain water stream; then

4) directing said drain water stream, carrying said food particles, out of said separation area toward said sewer system;

5) removing said cover; then

6) removing said grease from said container; then

7) replacing said cover.

Claim 28. (withdrawn): A method of cleaning a container for preventing grease in a drain water stream containing grease, from being carried to a sewer system, said method comprising:

removing a detachably attached cover from said container;

cleaning said container; and
replacing said detachably attachable cover.

Claim 29. (withdrawn): A method of cleaning a container for preventing grease, in a drain water stream containing grease, from being carried to a sewer system, said method comprising:

removing at least one baffle detachably attached to said container;
cleaning said container;
cleaning said baffle; and
replacing said baffle.

Claim 30. (withdrawn): The method of claim 29, said method further including an initial step of removing a detachably attached cover from said container, and a final step of replacing said cover.

Claim 31. (new): The wastewater separator of claim 2, wherein the separation flow director comprises a ramp having a radiused top for discouraging turbulent flow in said wastewater stream.

Claim 32. (new): The wastewater separator of claim 2, wherein said flow directing inlet baffle is sized and shaped to encourage laminar flow over said separation flow director.

Claim 33. (new): The wastewater separator of claim 1, wherein the wastewater stream director is sized and shaped to discourage turbulent flow in said wastewater stream.